REMARKS

Claims 1-6, and 8-17 are pending. Claim 7 has been canceled.

1. Amendment to the claims

(A) With respect to claim 1, the numbers (i) and (ii) are introduced to make clear the existence of the two components in an aqueous dispersion of claim 1. The newly added component (ii) and its content of not more than 1.0% by weight are supported by the original claim 7. "Stirring at least one hour" is added to the step (b). This is supported by Example at page 46 of the present specification. An example of the step (b) of the currently amended claim 1 is described at page 46, lines 18-20 as: "To the mixture, 2.0 g of sodium dodecylsulfonate (SDS), and 0.4 g of styrene were added and stirred for 1 hour at room temperature under a nitrogen gas stream." Finally, the typographical error "absorbing" has been corrected to "adsorbing." The correction is supported by the description of page 17, lines 8-16.

(B) With respect to the amendment made to claim 2, the step (a) in claim 1 recites two compounds: I. a hydrophilic colloid; or II. a compound having a hydrophilic portion and a hydrophobic portion. Claim 2 is amended to make clear the selection of the compound II used in the step (a) of claim 1.

(C) Claim 7 is cancelled as a result of inclusion of the subject matter of claim 7 into claim 1.

(D) As for claim 10, the amendment is supported by the description at page 8, lines 2-4 of the present specification.

2. Amendment to the Abstract

The Applicants have amended the abstract to a single paragraph and have corrected a typographical error in the abstract.

3. Informalities of words

Claims 2 and 7 have been objected to for informalities. Claim 2 has been amended and the Applicants believe the basis of the objection has been corrected. Claim 7 has been canceled.

4. Claim Rejection under 35 USC 112

Claims 1-7 have been rejected under 35 USC 112 as being indefinite.

(i) Claims 1 and 6: The Examiner takes the position that it is not clear how hydrophilic colloid would form a hydrophobic site on a pigment.

(ii) Claim 8: It is pointed out that "outermost portion" is not clear.

(iii) Claim 10: The terms "pigment" and "dye" are misused.

5. Claim Rejection under 35 USC 102

(A) Claims 1, 2, 4-13 and 15-17 have been rejected under 35 USC 102(e) over McCovick (US 2004/0110867).

(B) Claims 1, 4 and 6-8 have been rejected under 35 USC 102(b) over Reiss (US 3714102).

(C) Claims 1, 2 and 5 have been rejected under 35 USC 102(e) over Miyabayashi (US 2004/0229974).

(E) Claims 1, 4-8 and 10 have been rejected under 35 USC 102(b) over Martin (US 4608401).

6. Claim Rejections under 35 USC 103

(A) Claim 4 has been rejected under 35 USC 103 (a) over Miyabayashi in view of WO 01/96483.

(B) Claim 14 has been rejected under 35 USC 103 (a) over McCovick in view of Elwakil (US 5833743).

(C) Claims 6-12 and 14-17 have been rejected under 35 USC 103 (a) over Miyabayashi in view of WO 01/96483.

(D) Claim 13 has been rejected under 35 USC 103 (a) over Miyabayashi in view of WO 01/96483, and further in view of Ma et al. (US 5648405).

(E) Claims 1, 3-7, 9-13 and 15-17 have been rejected under 35 USC 103 (a) over JP-A 2002-012802.

(F) Claim 14 has been rejected under 35 USC 103 (a) over JP-A 2002-012802 in view of Elwakil.

7. Applicants Response

7-1. Claim Rejection - 35 USC 112

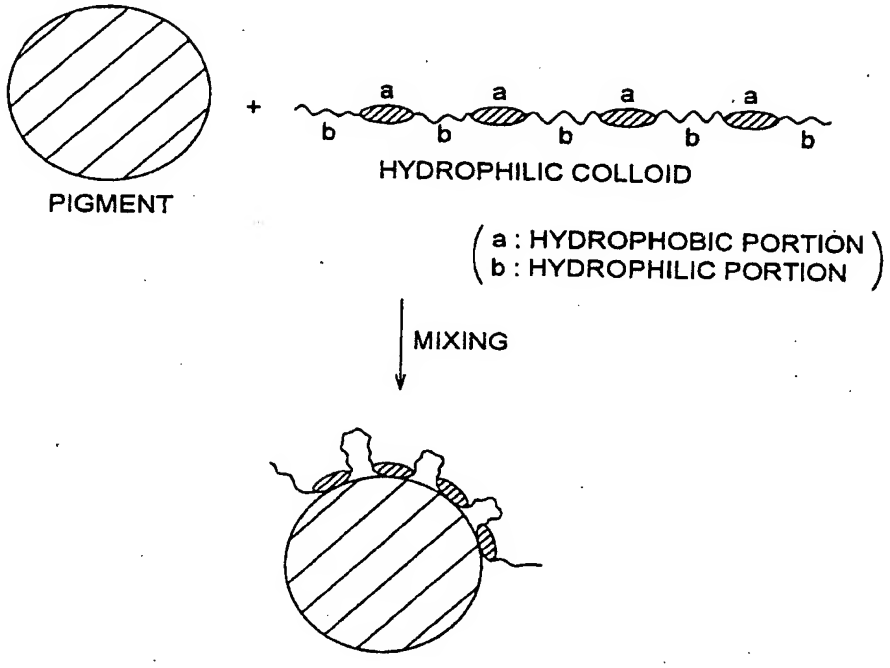
(1) Claims 1 & 6: hydrophobic site on pigment

The most distinctive feature of the present claim is to achieve a thick monomer layer on a surface of the pigment. In order to achieve this layer, a monomer is added to a

mixture of a surfactant with a dispersion of the pigment particle and then stirred for at least one hour as in the step (b) of the amended claim 1.

A hydrophilic colloid (a surfactant) has a hydrophilic portion and a hydrophobic portion in the molecule. When a hydrophilic colloid is mixed with a pigment particle dispersed in water-based solvent, the hydrophobic portion is adsorbed on the surface of the pigment to form a hydrophobic site as illustrated by Fig. 1.

FIG. 1



Because the surface of the pigment is hydrophobic, the hydrophilic portion shall be positioned apart from the surface of the pigment. Then an added monomer is adsorbed

on the formed hydrophobic site on the pigment. The monomer is accumulated on the surface of the pigment to yield a thick monomer layer after stirring for at least one hour.

In the preferred embodiment of the present invention, at least one hour is required to accomplish a hydrophobic site as is shown in Table 1 at page 53 of the present specification. The inventive samples need a stirring time of one or two hours. After preparing a hydrophobic site on the surface of the pigment, the added monomer in step (b) can be adsorbed more easily on the hydrophobic site on the pigment during this stirring time.

The supposed mechanism to achieve the polymer covered pigment is also described in page 13, lines 9-15.

(2) Claims 8: outermost portion

The outermost portion of the polymer is a portion which is not contact with the pigment.

(3) Claim 10: pigment vs. dye

The claim 10 is amended so as to conform the term of the present claims. The term "dye" should be "pigment".

7-2. Claim Rejections - 35 USC 102 and 35 USC 103

There is no teaching or suggestion to form a hydrophobic site on a pigment by (a) mixing a hydrophilic colloid or a compound having a hydrophilic portion and a hydrophobic portion with a dispersion of the pigment particle for at least one hour to form a hydrophobic site which is capable of adsorbing a monomer compound on a surface of the pigment.

The cited references only describe:

(i) to mix a compound having hydrophilic portion and hydrophobic portion with a dispersion of pigment particles;

(ii) adding a monomer to the mixture; and

(iii) adding a polymerization initiator to form monomer on the surface of the pigment from the monomer.

There is no teaching to stir for at least one hour as described in the step (b) of the currently amended claim 1. This step is required to achieve: "a content of the polymer microparticles containing no pigment is not more than 1.0% by weight based on the colored microparticles," as recited in claim 1. When the mixing time is less than one hour, the content of the polymer microparticles without pigment is much higher than 1.0 wt%. See pigment dispersion No. 19 (20.4%) and No. 21 (25.6%) in Table 1 at page 53 of the present specification. In these two cases, no mixing time was set for preparation of the samples and the content of the polymer microparticles was higher than 1.0%.

By taking into consideration the above-described amendments and remarks, the withdrawal of the Rejections by the Examiner is respectfully requested.

Should the Examiner have any questions or concerns, the Examiner is invited to call the undersigned attorney of record.

Respectfully submitted,

Date: August 7, 2006

Squire, Sanders & Dempsey L.L.P.
One Maritime Plaza
Suite 300
San Francisco, CA 94111
Facsimile (415) 393-9887
Telephone (415) 954-0323
ckerrigan@ssd.com

Cameron K. Kerrigan
Attorney for Applicant
Reg. No. 44,826